

IN THE SPECIFICATION

A. Applicants hereby amend title on page 1 of the specification as follows:

“A Data Directed Signal Acquisition Loop ~~that Synchronizes to a Received~~
Signal By Using the Redundancy of the Data in the Frequency Domain”

B. Applicants hereby delete the first paragraph on page 6 as follows:

~~Because of the way the FPLL uses the complex information to provide both magnitude and direction information, it locks up faster, and phase noise that is less than 90 degrees out of phase doesn't disrupt the lock. However, the FPLL does not perform a convolution of the data, and is therefore dependent upon a pilot to operate. It is therefore not suitable for use with, for example, a double sideband suppressed signal.~~

C. The Applicants hereby amend the paragraph, on page 15 beginning on line 6 of the specification, as follows:

It will be appreciated that the inversion provided by the in-phase loop can be performed at other points in the circuit. For example, referring to Figure 5, if the amplifier 551 is a hard limiter, the real multiplier 552 can be repositioned, ~~at any of the points labeled “a” or “b.”~~ In this case, the multiplier 552 is still driven by the output of the hard limiter 551. In some ~~these~~ embodiments, ~~since the inversion has already been~~ performed by the time the signal reaches the real multiplier 533, the output of the amplifier 534 is provided directly to the first low pass filter 460. In other embodiments ~~For another example, if the amplifier 551 is a soft limiter. And, in still other~~ embodiments, amplifier 511 is a ~~or linear amplifier, the real multiplier 551 can still be~~

~~positioned at either points labeled "b."~~ (Note that in these embodiments the real multiplier 551 must be a full multiplier, since the potential multiplication is not limited to a sign change.) It will be appreciated that choosing a hard limiter, a soft limiter, or a linear amplifier has implications for the capture and noise-reduction capabilities of the loop 400. For example, a hard limiter is more susceptible to noise during capture, but once locked is more effective at holding the lock through noise.